

Supplementary Table 1. Novel pathogenic or likely pathogenic variants identified in Taiwan PKD

Gene	Variant (c.)	Variant (p.)	ACMG Classification	gnomAD MAF	Variant (c.)	Variant (p.)	ACMG Classification	gnomAD MAF
<i>PKD1</i> NM_001009944. 3	c.350T>A	p.Leu117*	P		c.7460T>C	p.Leu2487Pro	LP	
	c.427C>T	p.Gln143*	LP		c.7624G>T	p.Gly2542Cys	LP	
	c.689G>T	p.Cys230Phe	LP		c.7694C>T	p.Ala2565Val	LP	
	c.829delC	p.Leu277fs	P		c.7829_7836delAGTA CTCG	p.Glu2610fs	P	
	c.890dup	p.Leu298fs	P		c.7831T>C	p.Tyr2611His	LP	0.0000319 (1/31372)
	c.1013_1019delCC CTGGG	p.Alanine338fs	P		c.7844T>G	p.Leu2615Arg	LP	
	c.1201+2T>C	p.?	P		c.7886_7887insC	p.Ala2630fs	P	
	c.1265T>A	p.Leu422Gln	LP		c.7969A>C	p.Thr2657Pro	LP	
	c.1336_1339delATG G	p.Met446fs	P		c.8291_8308delTGCG CTCCCGCGTGCTCA	p.Met2764_Leu2769del	LP	
	c.1364T>C	p.Phe455Ser	LP		c.8299C>G	p.Arg2767Gly	LP	
	c.1385+1G>T	p.?	P		c.8306_8310delTCAC	p.Leu2769fs	P	
	c.1688delA	p.Gln563fs	LP		c.8327T>C	p.Leu2776Pro	LP	
	c.1765delC	p.Leu589fs	P		c.8359C>G	p.Arg2787Gly	LP	
	c.1796delT	p.Leu599fs	P		c.8362_8371delTCGG ACCCGC	p.Ser2788fs	P	
	c.1849+2T>G	p.?	P	0.00562 (60/10680, ALFA)	c.8377C>G	p.Leu2793Val	LP	0.000011 (3/125568, TOPMed)
	c.2073delC	p.Alanine692fs	P		c.8751_8761delGGCC GGGCTGC	p.Alanine2918fs	P	
	c.2803C>T	p.Leu935Phe	LP		c.9033C>G	p.Tyr3011*	P	
	c.2884G>T	p.Asp962Tyr	LP		c.9074G>A	p.Trp3025*	P	
	c.2894delT	p.Phe965fs	P		c.9124_9130delGTCT GCC	p.Val3042fs	P	
	c.3132_3156dup	p.Phe1053fs	P		c.9129C>A	p.Cys3043*	P	
	c.3426delG	p.Val1144fs	LP		c.9158C>A	p.Alanine3053Asp	LP	
	c.3524_3527dup	p.Ala1177fs	P		c.9173C>T	p.Pro3058Leu	LP	0.0000261 (5/191614)

Supplementary Table 1. Novel pathogenic or likely pathogenic variants identified in Taiwan PKD (continued)

c.3675_3676insC	p.Gly1226fs	P	c.9240delA	p.Cys3081fs	LP	
c.3741G>A	p.Met1247Ile	LP	c.9400A>G	p.Thr3134Ala	LP	0.000004 (1/246260)
c.3833_3845delGC CCCGCCGGCCA	p.Ser1278fs	P	c.9507delG	p.Ile3170fs	LP	
c.4209delT	p.Cys1403fs	LP	c.9541A>G	p.Lys3181Glu	LP	
c.4834dup	p.Thr1612fs	P	c.9585G>T	p.Trp3195Cys	LP	
c.4868_4869dup	p.Ile1624fs	P	c.9644T>C	p.Val3215Ala	LP	
c.5157delG	p.Trp1720fs	P	c.9827delC	p.Thr3276fs	P	
c.5207_5208delTC	p.Val1736fs	P	c.9835C>T	p.Gln3279*	P	
c.5436delC	p.Gly1813fs	LP	c.10188dup	p.Lys3397fs	LP	
c.5517G>A	p.Trp1839*	P	c.10220+1G>A	p.?	P	
c.5602G>T	p.Ala1868Ser	LP	0.000012 (3/246184)	c.10406-2A>G	p.?	P
c.5601_5609delTGC CTCCAA	p.Ser1869_Ala187 1del	LP	c.10616C>T	p.Thr3539Ile	LP	
c.5669_5682delTG GTGCTGTGGGCC	p.Leu1890fs	P	c.10710_10712delGG C	p.Ala3571del	LP	
c.5803delC	p.Arg1935fs	P	c.10711delG	p.Ala3571fs	LP	
c.5842dup	p.Val1948fs	P	c.10764G>A	p.Trp3588*	P	
c.5970delG	p.Asn1991fs	LP	c.11256dup	p.Arg3753fs	P	
c.6102delG	p.Leu2035fs	P	c.11274_11275delCT	p.Tyr3759fs	P	
c.6109dup	p.Glu2037fs	P	c.11411+1dup	p.?	P	
c.6224G>C	p.Arg2075Pro	LP	c.11510T>C	p.Leu3837Pro	LP	
c.6293A>C	p.Asp2098Ala	LP	c.11526G>T	p.Trp3842Cys	LP	
c.6296_6319delGG TCGCCAGGGCAG GACACAGATG	p.Gly2099_Asp210 6del	LP	c.11687_11694dup	p.Leu3899fs	P	
c.6341_6344delACC T	p.Tyr2114fs	P	c.11725_11727delCTG	p.Leu3909del	VUS_P	
c.6371T>A	p.Val2124Glu	LP	c.11758dup	p.Arg3920fs	LP	
c.6497G>T	p.Arg2166Leu	LP	c.11782delT	p.Trp3928fs	LP	
c.6512C>G	p.Ala2171Gly	LP	c.11955dup	p.Ala3986fs	LP	
c.6534_6550delCGT CACCTACCAGACT G	p.Cys2178fs	P	c.12003G>C	p.Lys4001Asn	LP	0.000009 (2/226208)
c.6555C>G	p.Tyr2185*	P	c.12013_12016delCAG C	p.Gln4005fs	LP	
c.6647T>C	p.Leu2216Pro	LP	c.12123_12124dup	p.Gln4042fs	LP	

Supplementary Table 1. Novel pathogenic or likely pathogenic variants identified in Taiwan PKD (continued)

<i>PKD2</i> NM_000297.4	c.6667C>G	p.Leu2223Val	LP	c.12138G>A	p.Leu4046=	LP(splicing effect)	0.0000144 (4/277686)
	c.6669dup	p.Pro2224fs	P	c.12139_12146delGCC TTCCCCGCAGCTCG TGTC	p.Leu4047fs	P	
	c.6781G>T	p.Glu2261*	P	c.12245delT	p.Leu4082fs	P	
	c.6921_6922insCAC ACCG	p.Ala2308fs	LP	c.12299_12300insTAG G	p.Leu4100fs	P	
	c.6989T>A	p.Leu2330Gln	LP	c.12395T>A	p.Leu4132*	P	
	c.6991_7009delGC GGCTGGCGTGGA GTACA	p.Ala2331fs	P	c.12424G>T	p.Gly4142Cys	LP	0.000004 (1/245366)
	c.7009A>C	p.Thr2337Pro	LP	c.12442delG	p.Glu4148fs	P	
	c.7025T>G	p.Val2342Gly	LP	c.12456delA	p.Val4153fs	P	
	c.7109G>A	p.Cys2370Tyr	LP	c.12471delG c.12751_12823delAGC AGCCGGGGCGCCGC CGGATCTCCCGTG GCCCATCCCCGGGC CTGCGGCCAGCACT GCCCAAGCCGCCTTG	p.Met4158fs	P	
	c.7328delG	p.Gly2443fs	P		p.Ser4251fs	P	
<i>PKHD1</i> NM_138694.4	c.224delC	p.Pro75fs	LP	c.1049delT	p.Val350fs	LP	
	c.449_450insCG	p.Ser151fs	P	c.1091delC	p.Ala365fs	P	
	c.647_648delAC	p.Tyr216fs	P	c.1969G>T	p.Gly657*	P	
	c.755dup	p.Met252fs	LP	c.2011_2014delATT	p.Ile671fs	P	
	c.1030T>C	p.Cys344Arg	LP	c.2320G>T	p.Glu774*	P	
	c.1042T>A	p.Tyr348Asn	LP	c.2380_2392delAGTT CTTTACCAC	p.Ser794fs	P	
	c.227C>A	p.Pro76His	LP	0.0000079 6 (2/251386)	c.3299T>C	p.Phe1100Ser	LP
	c.439G>A	p.Gly147Ser	LP	0.000004 (1/251188)	c.4039_4091delGTGA GCCTGTCTGGATGC TCCATCCCTCTTCAC AGTCTGGAGGCTGG CATCTA	p.Val1347fs	P
	c.448+1G>A	p.?	P		c.4197_4199delTTCins AAG	p.Ser1400Arg	LP

Supplementary Table 1. Novel pathogenic or likely pathogenic variants identified in Taiwan PKD (continued)

	c.704delG	p.Gly235fs	P		c.4202delC	p.Ala1401fs	LP
	c.1046G>A	p.Gly349Glu	LP	0.000008 (2/251292)	c.8432T>C	p.Leu2811Pro	LP
	c.1124G>A	p.Arg375Gln	LP	0.0000283 (8/282550)	c.10284T>G	p.Tyr3428*	P
<i>GANAB</i> NM_198335.4	c.252+2T>C	p.?	P		c.1900+1G>C	p.?	P
	c.1389G>A	p.Trp463*	P		c.2116C>T	p.Arg706*	P
	c.1803+1G>T	p.?	P		c.2504G>A	p.Trp835*	P
<i>ALG8</i> NM_024079.5	c.396delA	p.Val133fs	P		c.824delG	p.Gly275fs	P

ACMG: The American College of Medical Genetics and Genomics, ALFA: Allele Frequency Aggregator (<https://www.ncbi.nlm.nih.gov/snp/docs/gsr/alfa/>), gnomAD: The Genome Aggregation Database (<https://gnomad.broadinstitute.org/>), LP: likely pathogenic, P: pathogenic, MAF: minor allele frequency, TOPMed: The Trans-Omics for Precision Medicine (<https://topmed.nhlbi.nih.gov/>).

Supplementary Table 2. Mutation Landscape of Taiwan Autosomal Dominant Polycystic Kidney Disease.

Gene	Family	Coding Change (c.)	Amino Acid Change	Mutation type	Decision	ACMG (VarSome)	ClinVar	De Mayo	PKDB	HGMD (PtLOVD)	dbSNP	Genome database Frequency	Same amino acid change but different coding changes in references		
<i>PKD1</i>															
DY2288		c.196C>A	p.Pro66Thr	Missense	VUS	Uncertain Significance_LP									
DY1143		c.256C>T	p.Leu86Phe	Missense	VUS	Uncertain Significance_LP					rs1263493445	0.000004 (1/264690, TOPMED)			
DY828, DY1349, DY1535, DY1661, DY1907		c.266A>C	p.Asn89Thr	Missense	VUS	Benign		Indeterminate			rs1434978033	0.000163 (27/165760, GnomAD)			
DY1289, DY2243		c.348_352delTTAA	p.Asn116fs	Frameshift Indel	P	Pathogenic	Pathogenic	Definitely Pathogenic							
DY1402		c.350T>A	p.Leu117*	Truncating	P	Pathogenic							PMID: 31740684	c.350T>G	
DY318		c.356A>G	p.Glu119Gly	Missense	VUS	Uncertain Significance					rs748839748	0.000007 (1/149554, GnomAD)			
DY2007		c.412C>T	p.Arg138*	Truncating	P	Pathogenic	Likely path	Definitely Path+			rs1596591955				
DY1441		c.417G>A	p.Trp139*	Truncating	P	Pathogenic		+							
DY1192		c.427C>T	p.Gln143*	Truncating	P	Likely Pathogenic									
DY1169		c.430C>T	p.Gln144*	Truncating	P	Likely Pathogenic									
DY2232		c.445C>T	p.Gln149*	Truncating	P	Pathogenic		+	Pathogenic						
DY1925		c.689G>T	p.Cys230Phe	Missense	P	Likely Pathogenic									
DY2170		c.692T>C	p.Leu231Pro	Missense	VUS	Uncertain Significance_P									
DY95		c.776G>A	p.Cys259Tyr	Missense	P	Likely Benig	Uncertain	Highly Likely	P+/-		rs529066905	0.000165 (28/169848, GnomAD)			
DY1736, DY1782 (<i>in-cis</i>)		c.812C>A	p.Ala271Asp	Missense	P	Likely Pathogenic	Likely Pathogenic	+	Likely Pathogenic						
DY154		c.829delC	p.Leu277fs	Frameshift Indel	P	Pathogenic							PMID: 27499327	not existed in the supplemental data	
DY125, DY2231		c.856_862delCTGGC	p.Gly287*	Truncating	P	Pathogenic	Pathogenic	Definitely Pathogenic			rs1555459108	0			
DY1347		c.890dup	p.Leu298fs	Frameshift Indel	P	Pathogenic							PMID: 33462484	non-PKD related	
DY705, DY1638, DY1661,		c.974A>G	p.Tyr325Cys	Missense	P	Likely Patho	Conflicting	Highly Likely	P+/-		rs1232180956	0			
DY1956															
DY1381		c.1013_1019delCCCT	p.Ala338fs	Frameshift Indel	P	Pathogenic							PMID: 27499327	c.1013_1039del27	
DY1844		c.1021delG	p.Ala341fs	Frameshift Indel	P	Pathogenic							PMID: 27499327		
DY1964		c.1198C>T	p.Arg400*	Truncating	P	Pathogenic	Pathogenic	Definitely Path+			rs774453006	0.00001 (1/71508, GnomAD)			
KMUH2349		c.1201+2T>C	p.?	Splicing site	P	Pathogenic							PMID: 27835667	c.1201+1G>A	
1_A4		c.1202-9G>A	p.?	Splicing site	P	Uncertain Si	Likely path	Likely Pathogenic							
DY20		c.1202-1G>T	p.?	Splicing site	P	Pathogenic									
DY2025		c.1222delT	p.Ser408fs	Frameshift Indel	P	Likely Pathogenic									
DY1426		c.1261C>T	p.Arg421Cys	Missense	P	Likely Patho	Likely pathogenic	(Last rev +)			rs1567216536	0			
KMUH_1736, DY828		c.1265T>A	p.Leu422Gln	Missense	P	Likely Pathogenic									
DY292, DY1825, DY1862, DY1937, DY2223		c.1295C>T	p.Ala432Val	Missense	P	Likely Patho	Likely path	Highly Likely	P+/-		rs1060499699	0			
DY2181		c.1336_1339delATGG	p.Met446fs	Frameshift Indel	P	Pathogenic									
DY2015		c.1364T>C	p.Phe455Ser	Missense	P	Likely Pathogenic									
DY2041		c.1385+1G>T	p.?	Splicing site	P	Pathogenic									
DY2172		c.1591G>A	p.Glu531Lys	Missense	P	Uncertain Si	Uncertain significance	+			rs1567215326	None			
DY25, DY304		c.1597C>T	p.Gln533*	Truncating	P	Pathogenic		Definitely Path+							
DY1458		c.1688delA	p.Gln563fs	Frameshift Indel	P	Likely Pathogenic									
DY2092		c.1765delC	p.Leu589fs	Frameshift Indel	P	Pathogenic									
DY13		c.1781T>A	p.Phe594Tyr	Missense	VUS	Uncertain Significance	Indeterminate								
DY748		c.1781T>C	p.Phe594Ser	Missense	VUS	Uncertain Si	Uncertain significance								
DY1858		c.1796T>C	p.Leu599Pro	Missense	VUS	Uncertain Significance									
DY2056		c.1796delT	p.Leu599fs	Frameshift Indel	P	Pathogenic							PMID: 29529603	c.1796_1808del13	
DY2159		c.1831C>T	p.Arg611Trp	Missense	P	Likely Patho	Conflicting	Likely Pathogen	+	likely path	rs1555458413	0.00000 (0/10680, ALFA)			
DY814		c.1849+2T>G	p.?	Splicing site	P	Pathogenic					rs1596582514	0.0232 (67/2894, KOREAN); 0.00562 (60/10680, ALFA Project)			
DY1770, DY1748		c.1849+5_1849+6delG	p.?	Splicing site	VUS	Uncertain Significance	Indeterminate								
DY1239, DY1423		c.2016dup	p.Pro673fs	Frameshift Indel	P	Likely Pathogenic				Pathogenic					
DY170Z, DY2283		c.2073delC	p.Alanine692fs	Frameshift Indel	P	Pathogenic									
DY1356		c.2097+5G>A	p.?	Splicing site	VUS	Uncertain Si	Uncertain significance	(Last reviewed: Feb 5, 2020)							

DY297	c.2180T>C	p.Leu727Pro	Missense	P	Likely Pathogenic	Conflicting	Highly Likely Pathogenic		rs1616940	0.001 (1/998, GoNL)				
DY1826 (<i>in-cis</i>)	c.2432T>C	p.Leu811Pro	Missense	VUS	Uncertain Significance									
DY2130	c.2489C>T	p.Ala830Val	Missense	VUS	Uncertain Significance	LP			rs775988021	0.000038 (10/264690, TOPMED)				
DY1362, KMUH1619, KMUH1825	c.2494dupC	p.Arg832fs	Frameshift Indel	P	Pathogenic	Pathogenic	Definitely Pathogenic		Pathogenic	rs1567210630	0			
DY1645, DY1647, DY1848	c.2534T>C	p.Leu845Ser	Missense	P	Pathogenic	Pathogenic	Highly Likely Pathogenic	Likely Pathogenic	rs199476100	0.000004 (1/230128, GnomAD)				
DY2106	c.2671G>A	p.Asp891Asn	Missense	VUS	Uncertain Significance	LP			rs770952448	0.000004 (1/264690, TOPMED)				
DY1997	c.2803C>T	p.Leu935Phe	Missense	P	Likely Pathogenic									
DY1305	c.2884G>T	p.Asp962Tyr	Missense	P	Likely Pathogenic									
DY1413	c.2885A>G	p.Asp962Gly	Missense	P	Likely Benign	Uncertain Significance	Likely Pathogenic							
DY2139	c.2894delT	p.Phe955fs	Frameshift Indel	P	Pathogenic									
DY2268	c.2972T>C	p.Val991Ala	Missense	VUS	Uncertain Significance	LP			p.Val991Gly (VUS)					
DY349	c.2985+6T>C	p.?	Splicing site	VUS	Uncertain Significance	LP								
DY2145	c.2985+6_2985+52del	p.?	Splicing site	VUS	Uncertain Significance	LP								
DY130	c.2986-1G>A	p.?	Splicing site	P	Pathogenic	Pathogenic								
DY99, DY2282	c.3088G>A	p.Val1030Met	Missense	VUS	Uncertain Significance				rs747210535	0.000016 (4/246314, GnomAD)				
DY2203	c.3132_3156dup	p.Phe1053fs	Frameshift Indel	P	Pathogenic									
DY1685, DY1815	c.3161+1G>A	p.?	Splicing site	P	Pathogenic				Likely Pathogenic					
DY1386	c.3196C>T	p.Gln1066*	Truncating	P	Pathogenic		Definitely Pathogenic							
DY1404	c.3202C>T	p.Gln1068*	Truncating	P	Pathogenic	Pathogenic	Definitely Pathogenic							
DY1114	c.3322T>C	p.Ser1108Pro	Missense	VUS	Uncertain Significance									
DY1088, DY1162	c.3349C>T	p.Gln1117*	Truncating	P	Pathogenic	Pathogenic	Definitely Pathogenic	Pathogenic						
DY1707	c.3380C>A	p.Pro1127His	Missense	VUS	Uncertain Significance									
DY55	c.3386T>A	p.Val1129Glu	Missense	VUS	Uncertain Significance									
DY1826 (<i>in-cis</i>)	c.3392T>C	p.Val1131Ala	Missense	VUS	Uncertain Significance									
DY2208	c.3426delG	p.Val1144fs	Frameshift Indel	P	Likely Pathogenic						PMID: 27499327	c.3425_3428dupGGCC		
DY691, DY1996, DY2081, DY2218	c.3490G>C	p.Gly1164Arg	Missense	P	Likely Pathogenic		+							
DY699	c.3496G>A	p.Gly1166Ser	Missense	P	Uncertain Significance	Conflicting	Likely Pathogenic	+	rs573566419	0.000065 (12/184266, GnomAD)				
DY1968	c.3524_3527dup	p.Ala1177fs	Frameshift Indel	P	Pathogenic									
DY1573	c.3675_3676insC	p.Gly1226fs	Frameshift Indel	P	Pathogenic									
DY1860	c.3741G>A	p.Met1247Ile	Missense	P	Likely Pathogenic									
DY1330	c.3833_3845delGCC	p.Ser1278fs	Frameshift Indel	P	Pathogenic						PMID: 30042192	c.3831_3847del		
DY2036	c.3955G>A	p.Gly1319Arg	Missense	P	Likely Pathogenic	Likely pathogenic	+	Likely Pathogenic	rs747362311	0.000004 (1/243930, GnomAD_exome)				
DY789	c.3983G>A	p.Trp128*	Truncating	P	Pathogenic			+						
DY1100, DY1191, DY1363, DY1394, DY1446, DY1524, DY1573, DY1579, DY1822	c.4052G>A	p.Arg1351Gln	Missense	VUS	Likely Benign	Uncertain significance			rs374129201	0.000231 (29/125568, TOPMED)				
DY1730	c.4069delC	p.Leu1357fs	Frameshift Indel	P	Pathogenic	Pathogenic	Definitely Pathogenic							
DY751	c.4099_4100delAG	p.Arg1367fs	Frameshift Indel	P	Pathogenic	Pathogenic	Definitely Pathogenic							
DY2266	c.4099_4100delAG	p.Arg1367fs	Frameshift Indel	P	Pathogenic		Definitely Pathogenic	Pathogenic						
DY2201	c.4209delT	p.Cys1403fs	Frameshift Indel	P	Likely Pathogenic									
DY1109, DY1807, DY1992, DY2183	c.4306C>T	p.Arg1436*	Truncating	P	Pathogenic	Pathogenic	Definitely Pathogenic	Pathogenic						
A6, DY95	c.4369_4370delTC	p.Ala1458fs	Frameshift Indel	P	Pathogenic									
DY1930	c.4387C>T	p.Gln1463*	Truncating	P	Pathogenic		Definitely Pathogenic	+						
DY1091, DY1270 (<i>in-trans</i>)	c.4455C>G	p.Tyr1485*	Truncating	P	Pathogenic		Definitely Pathogenic	Pathogenic						

DY1350 (in-cis)	c.4460T>C	p.Phe1487Ser	Missense	VUS	Uncertain Significance								
DY1069, DY1189, DY1416,	c.4797C>A	p.Tyr1599*	Truncating	P	Pathogenic	Pathogenic	+	Pathogenic					
<u>DY1404</u>	c.4798A>G	p.Thr1600Ala	Missense	VUS	Uncertain Significance				rs776529978	0.000016	(4/249458, GnomAD)		
DY1366	c.4834dup	p.Thr1612fs	Frame shift Indel	P	Pathogenic								
DY1225	c.4868_4869dup	p.Ile1624fs	Frame shift Indel	P	Pathogenic								
DY43, DY320, DY1216,	c.5014_5015delAG	p.Arg1672fs	Frame shift Indel	P	Pathogenic	Pathogen	Definitely Pathogenic		rs1555455457	0			
DY1156, DY1350, DY1764,	c.5037C>A	p.Ser1679Arg	Missense	VUS	Likely Benign	Uncertain significance			rs144091742	0.000441	(120/272282, GnomAD)		
DY92	c.5157delG	p.Trp1720fs	Frame shift Indel	P	Pathogenic							PMID: 11857740	c.5159delG
DY2051	c.5207_5208delTC	p.Val1736fs	Frame shift Indel	P	Pathogenic								
DY1407	c.5363delG	p.Gly1788fs	Frame shift Indel	P	Likely Pathogenic	Definitely Pathogenic							
DY1870	c.5366C>A	p.Ser1789*	Truncating	P	Pathogenic	Pathogen	(Last reviewed: Jan 17, 2019) ?	-					
DY1435	c.5436delC	p.Gly1813fs	Frame shift Indel	P	Likely Pathogenic							PMID: 24611717	c.5438delG
DY851	c.5482C>T	p.Gln1828*	Truncating	P	Pathogenic	Definitely Patho	+						
DY831, DY1135, DY1186,	c.5483A>G	p.Gln1828Arg	Missense	VUS	Likely Benign	Indeterminate			rs563854855	0.000243	(53/217696, GnomAD)		
DY357, DY701, DY2078	c.5517G>A	p.Trp1839*	Truncating	P	Pathogenic								
DY2077	c.5585_5587delTCT	p.Phe1862del	In-frame Indel	VUS	Uncertain Significance	P							
DY1195, DY1788	c.5602G>T	p.Ala1868Ser	Missense	P	Likely Pathogenic				rs753398195	0.000012	(3/246184, GnomAD)		
DY1253	c.5601_5609delTGCC	p.Ser1869_Ala187	In-frame Indel	P	Likely Pathogenic								
DY1597	c.5669_5682delTGGTC	p.Leu1890fs	Frame shift Indel	P	Pathogenic								
DY1348	c.5682_5699delCAGC	p.Ser1895_Ala190	In-frame Indel	VUS	Uncertain Significance								
DY1439	c.5704G>T	p.Gly1902Trp	Missense	VUS	Uncertain Significance								
<u>DY728 (in-cis)</u>	c.5705G>A	p.Gly1902Glu	Missense	VUS	Uncertain Significance								
DY45	c.5803delC	p.Arg1935fs	Frame shift Indel	P	Pathogenic								
DY1241	c.5819dup	p.Arg1942fs	Frame shift Indel	P	Pathogenic								
DY1230	c.5842dup	p.Val1948fs	Frame shift Indel	P	Pathogenic								
DY1832	c.5852G>A	p.Arg1951Gln	Missense	VUS	Likely Benign	Uncertain significance	(Last reviewed: Jan 5, 2011)	rs137905643	0.000503	(115/228510, GnomAD)			
DY1893, DY108, DY2238	c.5968_5969delAG	p.Arg1990fs	Frame shift Indel	P	Pathogenic	Definitely Pathogenic							
B2	c.5970delG	p.Asn1991fs	Frame shift Indel	P	Likely Pathogenic								
DY1344, DY1754	c.5976_5978delCAC	p.Phe1992_Thr199	In-frame Indel	P	Uncertain Significance	Highly Likely Pathogenic	Likely Pathogenic						
DY294, DY295, DY1176,	c.5995G>A	p.Gly1999Ser	Missense	P	Likely Patho	Likely path	Highly Likely P+	Likely Pathogenic					
DY1436, DY1675, DY2140,	c.6018G>C	p.Trp2006Cys	Missense	P	Uncertain Significance		+						
DY2192	c.6024C>G	p.Phe2008Leu	Missense	VUS	Uncertain Significance				rs770185977	0.000012	(3/241618, GnomAD)		
DY1149	c.6037G>A	p.Val2013Ile	Missense	VUS	Uncertain Significance				rs778658448	0.000004	(1/242002, GnomAD)		
DY1926	c.6040C>T	p.Gln2014*	Truncating	P	Pathogenic	Definitely Patho	+P						
DY339, DY747, DY1533,	c.6040C>T	p.Gln2014*	Truncating	P	Pathogenic	Definitely Patho	+P						
DY1694, DY1704, DY1751	c.6102delG	p.Leu2035fs	Frame shift Indel	P	Pathogenic								
DY2173	c.6108G>T	p.Leu2036Phe	Missense	VUS	Uncertain Significance	P							
DY19, DY837, DY1657	c.6109dup	p.Glu2037fs	Frame shift Indel	P	Pathogenic								
DY1669	c.6224G>C	p.Arg2075Pro	Missense	P	Likely Pathogenic								
DY1450, DY1483, DY1497.	c.6293A>C	p.Asp2098Ala	Missense	P	Likely Pathogenic								
DY1346	c.6296_6319delGGTC	p.Gly2099_Asp210	In-frame Indel	P	Likely Pathogenic								
DY1648	c.6341A>G	p.Tyr2114Cys	Missense	P	Likely Patho	Likely pathogenic	(Last revi	+P					
DY1554	c.6341_6344delACCT	p.Tyr2114fs	Frame shift Indel	P	Pathogenic								
DY1163, DY1845	c.6371T>A	p.Val2124Glu	Missense	P	Likely Pathogenic								
DY1485	c.6395T>G	p.Phe2132Cys	Missense	P	Likely Benign	Uncertain	Likely Pathogen	+P	rs150154235	0.000325	(61/187642, GnomAD)		
DY1684, DY1944	c.6497G>T	p.Arg2166Leu	Missense	P	Likely Pathogenic				rs754882717	0			
DY1379	c.6499A>G	p.Asn2167Asp	Missense	P	Likely Pathogenic		+						

DY1938	c.7694C>T	p.Ala2565Val	Missense	P	Likely Pathogenic				rs774163518	0			
DY1654	c.7829_7836delAGTAC	p.Glu2610fs	Frameshift Indel	P	Pathogenic								
DY713, DY1259, DY1337, DY1542, DY1608	c.7833C>G	p.Tyr2611*	Truncating	P	Pathogenic	Pathogenic	Definitely Patho+	Pathogenic	rs138871063	0.000215 (27/125568, TOPMED)			
DY728 (in-dis)	c.5705G>A	p.Gly1902Glu	Missense	VUS	Uncertain Significance								
	c.7831T>C	p.Tyr2611His	Missense	P	Likely Pathogenic				rs1281912678	0.000014 (2/140226, GnomAD)			
DY2151 (in-dis)	c.7844T>G	p.Leu2615Arg	Missense	P	Likely Pathogenic		p.Leu2615Pro		rs764698239	0.000008 (2/264690, TOPMED)			
	c.6706T>C	p.Phe2236Leu	Missense	VUS	Likely Pathogenic/Uncertain Significance								
F4	c.7886_7887insC	p.Ala2630fs	Frameshift Indel	P	Pathogenic								
2_H1	c.7969A>C	p.Thr2657Pro	Missense	P	Likely Pathogenic								
DY2174	c.8017-2A>G	p.?	Splicing site	P	Pathogenic	Pathogenic	Definitely Patho+	Pathogenic	rs1567180640	0			
DY1166	c.8203C>T	p.Gln2735*	Truncating	P	Pathogenic		Definitely Patho+						
DY1831	c.8213_8214delAG	p.Glu2736fs	Frameshift Indel	P	Pathogenic		Definitely Pathogenic						
DY1194	c.8291_8308delTGCG	(p.Met2764_Leu2766) In-frame Indel		P	Likely Pathogenic								
DY1443	c.8299C>G	p.Arg2767Gly	Missense	P	Likely Pathogenic								
DY1530	c.8302G>A	p.Val2768Met	Missense	P	Likely Patho	Uncertain	Indeterminate	+	rs1456510041	0.000008 (2/246906, GnomAD)			
DY2065	c.8306_8310delTCAA	C(p.Leu2769fs	Frameshift Indel	P	Pathogenic								
DY108, DY327, DY1909	c.8311G>A	p.Glu2771Lys	Missense	P	Pathogenic	Pathogenic	Highly Likely Pe+	Likely Patho	rs1057518897	0 (0/10680, ALFA Project)			
DY1652	c.8327T>C	p.Leu2776Pro	Missense	P	Likely Pathogenic								
DY1637	c.8359C>G	p.Arg2787Gly	Missense	P	Likely Pathogenic								
DY1494	c.8362_8371delTCGG	(p.Ser2786fs	Frameshift Indel	P	Pathogenic						PMID: 23624871		c.8362_8363 ins34
DY42	c.8377C>G	p.Leu2793Val	Missense	P	Likely Pathogenic				rs752736484	0.000024 (3/125568, TOPMED)			
DY1668	c.8419T>C	p.Ser2807Pro	Missense	VUS	Uncertain Significance								
DY1294	c.8536A>C	p.Thr2846Pro	Missense	VUS	Uncertain Significance		+						
DY1207, DY2276	c.8537C>T	p.Thr2846Ile	Missense	P	Uncertain Significance	Likely Pathogen	+		rs1261349563	0.000008 (1/125568, TOPMED)			
DY751	c.8590G>T	p.Glu2864*	Truncating	P	Pathogenic	Pathogenic	+		rs374629549	0.000076 (20/264690, TOPMED)			
DY1096	c.8657delG	p.Gly2866fs	Frameshift Indel	P	Likely Pathogenic		Definitely Pathogenic						
DY1736, DY1782 (in-dis)	c.8606A>C	p.Glu2869Ala	Missense	VUS	Uncertain Significance				rs1370676628	0.000004 (1/233202, GnomAD)			
DY1544	c.8663G>A	p.Arg2888His	Missense	VUS	Likely Benig	Uncertain significance(Last reviewed: Apr 3, 2010)			rs200168879	0.000192 (51/265390, GnomAD)			
DY1881, DY1883	c.8751_8761delGGCC	(p.Ala2918fs	Frameshift Indel	P	Pathogenic								
DY1496	c.8792-1G>C	p.?	Splicing site	P	Pathogenic		Definitely Pathogenic						
DY57	c.8932_8933delTTinsA	p.Phe2978Thr	Missense	P	Likely Pathogenic		Likely Pathogenic						
DY132	c.8984T>C	p.Leu2995Pro	Missense	VUS	Uncertain Significance				rs762182312	0.008568 (989/115428, ExAC)			
DY1542, DY1608	c.9033C>G	p.Tyr3011*	Truncating	P	Pathogenic								
DY1113	c.9074G>A	p.Trp3025*	Truncating	P	Pathogenic								
DY1380	c.9103_9105delGAG	p.Glu3035del	In-frame Indel	P	Likely Pathogenic		+						
DY1521	c.9124_9130delGTCT	(p.Val3042fs	Frameshift Indel	P	Pathogenic								
DY1720	c.9129C>A	p.Cys3043*	Truncating	P	Pathogenic								
DY1501, DY1908	c.9158C>A	p.Ala3053Asp	Missense	P	Likely Pathogenic								
DY1745	c.9173C>T	p.Pro3058Leu	Missense	P	Likely Pathogenic				rs765531129	0.0000261(5/191614, GnomAD)			
DY1785	c.9201+4A>G	p.?	Splicing site	VUS	Uncertain Significance								
1_E1	c.9240delA	p.Cys3081fs	Frameshift Indel	P	Likely Pathogenic								
DY2263	c.9338G>A	p.Gly3113Glu	Missense	VUS	Uncertain Significance	LP							
DY1191	c.9388C>T	p.Arg3130Trp	Missense	P	Benign	Likely Pathogen	+		rs111244530	0.0000611(11/18080, GnomAD)			
DY1684	c.9400A>G	p.Thr3134Ala	Missense	P	Likely Pathogenic				rs779771874	0.000004 (1/246260, GnomAD)			
DY804	c.9404C>T	p.Thr3135Met	Missense	P	Likely Patho	Conflicting	Likely Pathogen	+	rs1555449635	0			
DY1134	c.9507delG	p.Ile3170fs	Frameshift Indel	P	Likely Pathogenic								
DY1105	c.9541A>G	p.Lys3181Glu	Missense	P	Likely Pathogenic								
DY2144	c.9548G>A	p.Arg3183Gln	Missense	P	Likely Patho	Uncertain significance			rs79648977	0.000295 (78/264690, TOPMED)			
DY1151, DY1160, DY1231, DY1231, DY1986	c.9547C>T	p.Arg3183*	Truncating	P	Pathogenic	Pathogenic	Definitely Patho+	Pathogenic	rs1485297878	0.000016 (2/125568, TOPMED)			

DY1274	c.9585G>T	p.Trp3195Cys	Missense	P	Likely Pathogenic											
DY1745	c.9644T>C	p.Val3215Ala	Missense	P	Likely Pathogenic											
DY1792	c.9746T>C	p.Leu3249Pro	Missense	VUS	Uncertain Significance											
DY840	c.9758T>C	p.Leu3253Pro	Missense	VUS	Uncertain Significance											
DY1851	c.9789G>A	p.Trp3263*	Truncating	P	Pathogenic		+									
DY1749, DY1913, DY1947	c.9827C>T	p.Thr3276Ile	Missense	VUS	Uncertain Significance											
DY1729	c.9827delC	p.Thr3276fs	Frameshift Indel	P	Pathogenic											
DY1182	c.9835C>T	p.Gln3279*	Truncating	P	Pathogenic											
DY1541, DY1733	c.9859_9861delCTC	p.Leu3287del	In-frame Indel	P	Pathogenic	Highly Likely Pathogenic	Likely Pathogenic									
DY2128, DY2186, DY2195	c.10086G>T	p.Gln3362Hs	Missense	VUS	Uncertain Significance			rs767064899	0.000053 (14/264690, TOPMED)							
DY728, DY1067, DY1091, DY1112, DY1167, DY1181, DY1270, DY1945	c.10102G>A	p.Asp3368Asn	Missense	P	Likely Benign	Likely Pathogen	+			rs762866943	0.000250(63/25188, GnomAD)					
DY2058	c.10139T>C	p.Phe3380Ser	Missense	VUS	Uncertain Significance LP											
DY1977	c.10151C>G	p.Ser3384*	Truncating	P	Pathogenic	Pathogen	Definitely Path+			rs1383556063	0.000008 (1/125568, TOPMED)					
DY1766 (<i>in-cis</i>)	c.10151C>G	p.Ser3384*	Truncating	P	Pathogenic	Pathogen	Definitely Path+			rs1383556063	0.000008 (1/125568, TOPMED)					
DY2075	c.10168C>T	p.Gln3390*	Truncating	P	Pathogenic	Pathogen	Definitely Path+			rs751447044	0.000048 (8/166260, GnomAD)					
DY298, DY299, DY300	c.10188dup	p.Lys3397fs	Frameshift Indel	P	Likely Pathogenic											
KMUH_HD213, DY1927	c.10220+1G>A	p.?	Splicing site	P	Pathogenic								PMID: 30042192		c.10220+2T>G	
DY1952	c.10280dup	p.Ser3429fs	Frameshift Indel	P	Pathogenic		+									
DY1725	c.10306C>T	p.Gln3436*	Truncating	P	Pathogenic											
DY52, DY856, DY1094, DY1411, DY1441, DY1540	c.10315C>T	p.Arg3439Trp	Missense	VUS	Likely Benign	Uncertain significance(Las+				rs374486955	0.000185 (51/275532, GnomAD)					
DY356 (<i>in-cis</i>)	c.10321C>T	p.Gln3441*	Truncating	P	Likely Pathogenic		+									
KMHK120	c.5132C>T	p.Thr1711lle	Missense	P	Uncertain Si other(Last	Likely Pathogenic				rs750076336	0.000064 (8/125568, TOPMED)					
DY1530	c.10406-2A>G	p.?	Splicing site	P	Pathogenic							PMID: 30230107		c.10406-1G>C		
DY2220	c.10441delG	p.Val3481fs	Frameshift Indel	P	Pathogenic	Pathogen	Likely pathogenic									
DY780	c.10585G>A	p.Glu3529Lys	Missense	VUS	Uncertain Significance											
DY2061	c.10616C>T	p.Thr3539lle	Missense	P	Likely Patho	p.Thr3539Ala, Conflicting interpretations of pathogenicity										
DY156, DY1173, DY1768	c.10710_10715delGG	p.Ala3571_Val3571_in-frame Indel	P	Likely Patho	Uncertain si	Highly Likely Pathogenic				rs777460677	0.000005 (1/202676, GnomAD)					
DY1991, DY2267	c.10710_10712delGG	p.Ala3571del	In-frame Indel	P	Likely Pathogenic								PMID: 20642692	10710_10715del6		
DY1173	c.10711delG	p.Ala3571fs	Frameshift Indel	P	Likely Pathogenic								PMID: 22936402	non-PKD related		
DY1197	c.10764G>A	p.Trp3588*	Truncating	P	Pathogenic											
DY2031, DY2115	c.10838T>C	p.Leu3613Pro	Missense	VUS	Uncertain Significance LP		+									
DY1515	c.10951G>A	p.Gly3651Ser	Missense	P	Pathogenic	Pathogen	Highly Likely Path+									
DY1204	c.11017-10C>A	p.?	Splicing site	P	Uncertain Si	Pathogen	Highly Likely Pathogenic			rs555703777	0.000016 (2/125568, TOPMED)					
DY1290	c.11156+2T>C	p.?	Splicing site	P	Pathogenic											
KMUH1799	c.11172G>A	p.Trp3724*	Truncating	P	Pathogenic		+									
DY1147, DY1553, DY1653, DY1765	c.11249G>A	p.Arg3750Gln	Missense	P	Likely Patho	Conflicting interpretations of pathogenicity				rs1327414405	0.000004 (1/247254, GnomAD)					
DY2062	c.11256dup	p.Arg3753fs	Frameshift Indel	P	Pathogenic								PMID: 32457805	c.11257_11269+3del		
DY1470	c.11257C>T	p.Arg3753Trp	Missense	P	Likely Patho	Pathogen	Highly Likely Pathogenic			rs1167476946	0.0000 (8/988, ALFA Project)					
DY1703	c.11258G>A	p.Arg3753Gln	Missense	P	Likely Patho	Conflicting	Highly Likely Path+			rs1555446330	0					
DY1504, DY1728	c.11274_11275delCT	p.Tyr3759fs	Frameshift Indel	P	Pathogenic					rs1555446105	0					
DY1604	c.11399C>T	p.Pro3800Leu	Missense	VUS	Uncertain Significance											
DY1384	c.11411+1dup	p.?	Splicing site	P	Pathogenic								PMID: 29633482	c.11411+1_11411+5delGTG		
DY2148	c.11411+5G>A	p.?	Splicing site	VUS	Uncertain Significance											
DY1942, DY2052	c.11453G>A	p.Gly3818Asp	Missense	P	Likely Patho	Likely pathogenic	+			rs1555445740	0					
DY1584	c.11461C>T	p.Gln3821*	Truncating	P	Pathogenic	Pathogen	Definitely Path+			rs1325300747	0.000008 (1/125568, TOPMED)					
DY2143	c.11482G>T	p.Glu3828*	Truncating	P	Pathogenic		Definitely Path+									
DY2123, DY2156	c.11510T>C	p.Leu3837Pro	Missense	P	Likely Pathogenic			p Leu3837Arg, likely pathogenic								

DY1089	c.2159dupA	p.Asn720fs	Frameshift indel	P	Pathogenic	Definitely Pathogenic						
DY1424	c.2276T>C	p.Phe759Ser	Missense	VUS	Uncertain Significance							
DY1546, DY1793	c.2320G>T	p.Glu774*	Truncating	P	Pathogenic							
DY1966	c.2380_2392delAGTC	p.Ser794fs	Frameshift indel	P	Pathogenic							
R803 st Table	c.2407C>T	p.Arg803*	Truncating	P	Pathogenic	Pathogenic	Definitely Path+ +	Pathogeni	rs778235410	0.0000119 (3/251064 GnomAD)		
DY1208, DY1242, DY1472, DY1942, DY2080	c.2522+1G>C	p.?	Splicing site	P	Pathogenic	Pathogenic						
DY1198	c.2544delG	p.Met849fs	Frameshift indel	P	Pathogenic				rs761705522	0.000004 (1/251186, GnomAD_exome)		
DY1608	c.2596A>G	p.Lys866Glu	Missense	VUS	Uncertain Significance				rs1480227336	0.000004 (1/251138, GnomAD_exome)		
DY336	c.2614C>T	p.Arg872*	Truncating	P	Pathogenic	Pathogenic	Definitely Path+ +	Pathogeni	rs755226061	0.000016; 0.00000398 (2/125568, TOPMED; 1/251096, GnomAD)		
2_E1, DY106, DY130, DY335, DY359, LSL	c.2629A>G	p.Arg876Gly	Missense	VUS	Uncertain Significance							
DY1110, DY1158, DY1237, DY1662	c.2671-2A>G	p.?	Splicing site	P	Pathogenic		Definitely Pathogenic					
KMUH2086	c.2726T>C	p.Val909Ala	Missense	VUS	Uncertain Significance							
<i>PKHD1</i>	c.218G>A	p.Arg73Gln	Missense	VUS	Uncertain Significance				rs577541526	0.000040 (10/251358, GnomAD_exome)		
	c.3953A>T	p.His1318Leu	Missense	VUS	Uncertain Si	Uncertain significance			rs200733734	0.000108 (27/250190, GnomAD_exome)		
	c.2507T>C	p.Val836Ala	Missense	P	Likely Patho	Pathogenic/Likely pathoge	+ +		rs199568593	0.000080 (20/251222, GnomAD_exome)		
	c.3313delT	p.Ser1105fs	Frameshift indel	P	Pathogenic	Pathogenic/Likely pathogenic			rs1057516922	None		
	c.2795G>A	p.Cys932Tyr	Missense	VUS	Uncertain Si	Uncertain significance			rs1329209110	0.000008 (1/125568, TOPMED)		
	c.3463C>T	p.Gln1155*	Truncating	P	Pathogenic	Pathogenic	+ +		rs1554200780	0.0 (0/10680, ALFA Project)		
	c.4197_4199delTTCCinsP	p.Ser1400Arg	Missense	P	Likely Pathogenic							
	c.4202delC	p.Ala1401fs	Frameshift indel	P	Likely Pathogenic							
	c.8432T>C	p.Leu2811Pro	Missense	P	Likely Pathogenic				rs779827172	0.000024 (6/250940, GnomAD_exome)		
	c.9368C>T	p.Ala3123Val	Missense	VUS	Uncertain Significance				rs779827172	0.000024 (6/250940, GnomAD_exome)		
	c.227C>A	p.Pro76His	Missense	P	Likely Pathogenic				rs753364440	0.000056 (7/125568, TOPMED)		
	c.439G>A	p.Gly1475Ser	Missense	P	Likely Pathogenic				rs1442794854	0.000004 (1/251188, GnomAD_exome)		
	c.448+1G>A	p.?	Splicing	P	Pathogenic							
	c.704delG	p.Gly235fs	Frameshift indel	P	Pathogenic							
	c.778+1G>C	p.?	Splicing	P	Pathogenic	Likely pathogenic			rs753471298	0.000004 (1/251432, GnomAD_exome)		
	c.1046G>A	p.Gly349Glu	Missense	P	Likely Pathogenic				rs746153656	0.000008 (2/251292, G found in cancer)		
	c.1124G>A	p.Arg375Gln	Missense	P	Likely Pathogenic			p.Arg375Tp.Arg375Trs767232748	0.000004 (1/264690, TOPMED)		PMID: 27415407	p.Arg375Trp
	c.1487G>A	p.Arg496Gln	Missense	VUS	Uncertain Significance				rs181391485	0.000076 (19/251216, GnomAD_exome)		
	c.1766_1786delGTCA	p.Arg589_Val595dIn frame indel	VUS	Uncertain Significance					rs745731220	0.000020 (5/251098, GnomAD_exome)		
	c.1849T>C	p.Tyr617His	Missense	VUS	Uncertain Si	Conflicting interpretations of pathogenicity	Likely	rs141177165	0.000299 (75/251252, GnomAD_exome)			
	c.2201T>C	p.Val734Ala	Missense	VUS	Uncertain Significance							
	c.2291C>T	p.Thr764Ile	Missense	VUS	Uncertain Si	Uncertain significance			rs190315828	0.000095 (24/251372, GnomAD_exome)		
	c.2341C>G	p.Arg781Gly	Missense	P	Uncertain Si	Pathogenic/Likely pathogenic			rs398124478	0.000040 (10/251408, GnomAD_exome)		
	c.2530T>C	p.Tyr844His	Missense	VUS	L_P							
	c.2507T>C	p.Val836Ala	Missense	P	Likely Patho	Pathogenic/Likely pathoge	+ +		rs199568593	0.000080 (20/251222, GnomAD_exome)		
	c.3299T>C	p.Phe1100Ser	Missense	P	Likely Pathogenic							
	c.3953A>T	p.His1318Leu	Missense	VUS	Uncertain Si	Uncertain significance			rs200733734	0.000108 (27/250190, GnomAD_exome)		
	c.4039_4091delGTGA	p.Val1347fs	Frameshift indel	P	Pathogenic							
	c.6091delG	p.Ala2031fs	Frameshift indel	P	Pathogenic	Pathogenic/Likely pathogenic			rs1057516804	0		
	c.7802A>G	p.Asn2601Ser	Missense	VUS	Uncertain Significance				rs142317594	0.000004 (1/251400, GnomAD_exome)		
	c.8870T>C	p.Ile2957Thr	Missense	P	Pathogenic	Pathogenic		Likely	rs760222236	0.000052 (13/251136, GnomAD_exome)		
	c.9282C>A	p.Asn3094Lys	Missense	VUS	Uncertain Significance							
	c.9472A>G	p.Met3158Val	Missense	VUS	Uncertain Significance				rs764138084	0.000004 (1/250882, GnomAD_exome)		
	c.9629C>G	p.Ser3210Cys	Missense	VUS	Uncertain Si	Conflicting interpretations o	+	VUS	rs141081295	0.000104 (13/125568, TOPMED)		
	c.10058T>G	p.Leu3353Arg	Missense	VUS	Uncertain Si	Conflicting interpretations of pathogenicity	Likely	rs77377414	0.000012 (3/251236, GnomAD_exome)			
	c.10284T>G	p.Tyr3428*	Truncating	P	Pathogenic							
	c.11741G>A	p.Arg3914Gln	Missense	VUS	Uncertain Significance				rs776601687	0.000008 (2/251220, GnomAD_exome)		
	c.11882G>A	p.Arg3961Gln	Missense	VUS	Uncertain Significance				rs749579192	0.000056 (7/125568, TOPMED)		

<i>GANAB</i>																	
DY1591	c.11_16delTAGCGG	p.Val4_Ala5del	In-frame Indel	P	Likely Pathogenic	Pathogenic								rs750723025	0.000036 (10/280422)		
DY716	c.193G>T	p.Asp65Tyr	Missense	VUS	Uncertain Significance												
DY1299	c.252+2T>C	p.?	Splicing site	P	Pathogenic												
DY2272	c.252+8_252+9delGA	p.?	Splicing site	VUS	Uncertain Significance												
DY1732	c.1389G>A	p.Trp463*	Truncating	P	Pathogenic												
DY2160	c.1803+1G>T	p.?	Splicing site	P	Pathogenic												
DY1919	c.1900+1G>C	p.?	Splicing site	P	Pathogenic												
DY778	c.2116C>T	p.Arg706*	Truncating	P	Pathogenic												
DY2043	c.2504G>A	p.Trp835*	Truncating	P	Pathogenic												
<i>ALG8</i>																	
DY858	c.164_165delGGinsTC	p.Trp55Phe	In-frame Indel	VUS	Uncertain Significance												
DY2242	c.175-2A>G	p.?	Splicing site	P	Pathogenic									Pathogenic			
DY158	c.396delA	p.Val133fs	Frameshift Indel	P	Pathogenic												
DY1591, DY1826	c.460G>A	p.Gly154Arg	Missense	VUS	Uncertain Significance								rs201359142	0.000016 (4/251222)			
DY1159, DY1499, DY1513, DY1538	c.482T>C	p.Ile161Thr	Missense	VUS	Uncertain Significance								rs373493408	0.000100 (27/282280)			
DY2275	c.599A>G	p.His200Arg	Missense	VUS	Uncertain Significance_LP								rs776497184	C=0.000008 (2/264690, TOPMED)			
DY1787, DY1854, DY1920, DY2090	c.824delG	p.Gly275fs	Frameshift Indel	P	Pathogenic								rs745894763	0.000004 (3/282444)			
DY704, DY1761	c.1169T>G	p.Leu390Arg	Missense	VUS	Uncertain Significance								rs1013838215	0.000008 (1/125568)			
DY855	c.1241A>G	p.His414Arg	Missense	VUS	Uncertain Significance												

ACMG: American College of Medical Genetics and Genomics, ALFA: Allele Frequency Aggregator, gnomAD: The Genome Aggregation Database, HGMD: Human Gene Mutation Database, LOVD: Leiden Open Variation Database, LP: likely pathogenic, P: pathogenic, TOPMed: The Trans-Omics for Precision Medicine, VUS: variant of unknown significance. Underscore indicated more than one variant was identified in the index case.

Supplementary Table 3. Summary of *PKD2* p.R803* Identified in Database and Previous Publication

	Database	p.R803* Number	Cohort Number	Allele Frequency	Note
	TOPMed	1	125568	0.0001635	East Asian
	GnomAD	3	251064	0.00001195	
	Mayo PKDB	7	2494	0.0028	
Publication Year	Country	p.R803*N umber	Cohort Number	Percentage in cohort (%)	Reference
Asian					
2005	Taiwan	1	20	5	1
2005	China	1	24	4.2	2
2006	Korea	4	91	4.3	3
2013	Taiwan	3	46	6.5	4
2014	Korea	1	20	5	5
2019	Korea (HOPE-P KD)	4	524	0.76	6
Non-Asian					
2001	Cyprus	1	-	-	7
2012	France	2	700	0.29	8
2016	Canada (TGESP)	1	220	0.46	9
2017	France (Genkyst)	6	293 (PKD2 only)	2.05	10
2018	Spain	1	101	0.99	11
2019	Canada (eTGESP)	7	612	1.1	12

TGESP: Toronto Genetic Epidemiology Study of PKD, HOPE-PKD: The coHOrt for genotype-PhenotypE correlation in ADPKD.

Supplementary References

- Chang MY, Chou YHW, Fang JT, et al. Mutations of the *PKD2* gene in Taiwanese patients with autosomal dominant polycystic kidney disease. *Renal*

failure 2005; 27: 95-100.

2. Zhang S, Mei C, Zhang D, et al. Mutation analysis of autosomal dominant polycystic kidney disease genes in Han Chinese. *Nephron Experimental Nephrology* 2005; 100: e63-e76.
3. Chung W, Kim H, Hwang YH, et al. PKD2 gene mutation analysis in Korean autosomal dominant polycystic kidney disease patients using two-dimensional gene scanning. *Clin Genet* 2006;70(6):502-8
4. Chang MY, Chen HM, Jenq CC, et al. Novel PKD1 and PKD2 mutations in Taiwanese patients with autosomal dominant polycystic kidney disease. *Journal of human genetics* 2013; 58: 720-727.
5. Choi R, Park HC, Lee K, et al. Identification of novel PKD1 and PKD2 mutations in Korean patients with autosomal dominant polycystic kidney disease. *BMC medical genetics* 2014; 15: 129.
6. Kim H, Park HC, Ryu H, et al. Genetic characteristics of Korean patients with Autosomal Dominant polycystic Kidney Disease by targeted exome Sequencing. *Scientific reports* 2019; 9: 1-11.
7. Deltas CC. Mutations of the human polycystic kidney disease 2 (PKD2) gene. *Hum Mutat* 2001;18(1):13-24
8. Audrézet MP, Cornec-Le Gall E, Chen JM, et al. Autosomal dominant polycystic kidney disease: comprehensive mutation analysis of PKD1 and PKD2 in 700 unrelated patients. *Human mutation* 2012; 33: 1239-1250.
9. Hwang Y-H, Conklin J, Chan W, et al. Refining genotype-phenotype correlation in autosomal dominant polycystic kidney disease. *Journal of the American Society of Nephrology* 2016; 27: 1861-1868.
10. Cornec-Le Gall E, Audrézet M-P, Renaudineau E, et al. PKD2-related autosomal dominant polycystic kidney disease: Prevalence, clinical presentation, mutation spectrum, and prognosis. *American Journal of Kidney Diseases* 2017; 70: 476-485.
11. Bullich G, Domingo-Gallego A, Vargas I, et al. A kidney-disease gene panel allows a comprehensive genetic diagnosis of cystic and glomerular inherited kidney diseases. *Kidney international* 2018; 94: 363-371.
12. Lanktree MB, Guiard E, Li W, et al. Intrafamilial variability of ADPKD. *Kidney international reports* 2019; 4: 995-1003.

Supplementary Table 4. Annual renal function decline in patients with *PKD2* p.Arg803* and non-p.Arg803* truncation

	Non-p.Arg803*			p.Arg803*		
	Coefficient	Standard error	p-value	Coefficient	Standard error	P-value
Intercept	72.91	6.62	<.0001	89.95	3.94	<.0001
Follow-up year	-2.67	0.77	0.0019	-2.09	0.39	<.0001
Follow-up year ²	0.10	0.09	0.26	-0.06	0.01	<.0001
Follow-up year ³	-0.01	0.003	0.002	-	-	
Follow-up year ⁴	-	-		-	-	

The estimated glomerular filtration rate (eGFR) was calculated using the CKD-EPI equation. The model was developed by mixed model incorporating random intercept and slope for longitudinal eGFR change. A p-value less than 0.05 was considered statistical significance.

Supplementary Table 5. Primers Used in This Study. Including primer sequences used for long-range PCR for PKD1 pseudogene regions, gene panel, and PKD2 microsatellite markers.

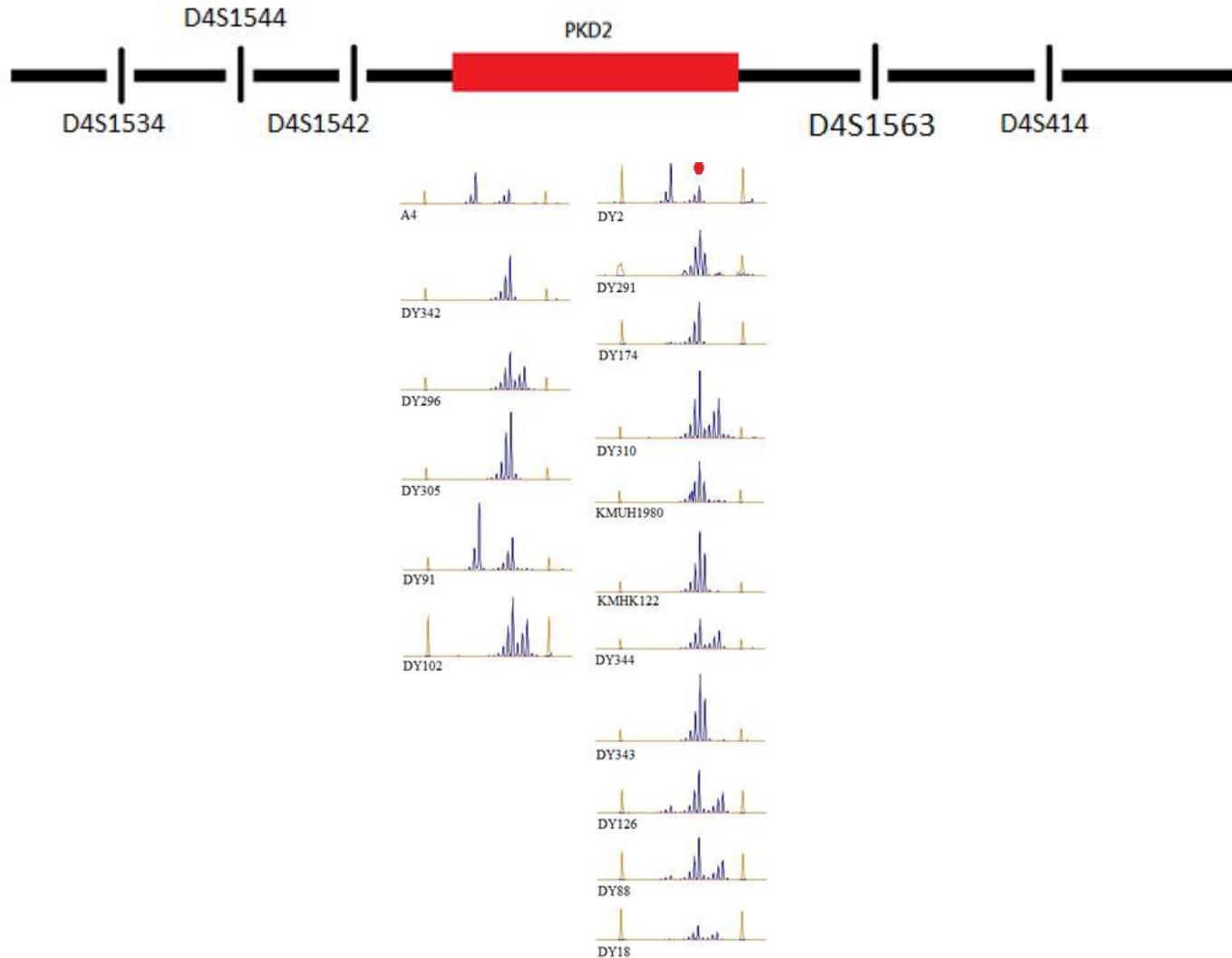
	Primer Name	Sequence	Length (bp)
<i>PKD1</i> Long_Range Primer	PKD1_LA_Ex CGGGGCCCGCACTGCAGGCCAG	587	
	PKD1_LA_Ex AGGCAGTTCCTTATTTAGCAGGGCCGC		
	PKD1_LA_Ex CCCCGAGTAGCTGAACTACAGTTAC	4041	
	PKD1_LA_Ex CGTCCTGCTGTGCCAGAGCG		
	PKD1_LA_Ex ACGCTCGAGCAGCTGCAGCCC	3893	
	PKD1_LA_Ex CTGCAGGGACAGCGTCAGTGA		
	PKD1_LA_Ex TGGAGGGAGGGACGCCAATC	4391	
	PKD1_LA_Ex GTCAACGTGGCCTCCAAGT		
	PKD1_LA_Ex ATCCCTGGGGTCTACCCTCTCTTA	5253	
	PKD1_LA_Ex ACACAGGACAGAACGGCTGAGGCTA		
	PKD1_LA_Ex ATGCTTAGTGAGGAGGCTGAGGGTC	3276	
	PKD1_LA_Ex GCTAAAGGGAATGGCTAAACCCG		
	PKD1_LA_Ex CGGGTCACCGGTTGTGGCA	3916	
	PKD1_LA_Ex ATGAGGCTTTCCACAGACAACAGAGGTT		
	Primer Name	Sequence	Sequence
<i>PKD1</i>	Exon1.1	CTGAGCTGCGGCCCTCC	GGCCCGCTACTCACAGC
	Exon1.2	TGCCCGTCAACTGCTC	AGGCAGTTCCTTATTTAGCAGGG
	Exon2	GGATTCCGGCAAAGCTGATG	CTGGCAATGTGTGGGATG
	Exon3	GAAGGGATAATTGGGGCCTG	CTGGCAGAGCTGTGAGTGTC
	Exon4	CTGGGAAGGACAGAGCTGG	CTGGCATAGACCCTCCCCAC
	Exon5.1	GTACCAAGGCTTGCCCCATC	CTGCCTGGCGCTATCAC
	Exon5.2	CTTCCACCTGCACGTCTGTC	CCTCCTCAGCACGTCTTC
	Exon5.3	CCACCAAGGGGGCCC	CCTCCCTGACAACAGCTAG
	Exon5.4	CCGGTGGAGAACAGCAGAAGG	GAGCCAGGAGGAGCAGAAC
	Exon6	TTCAGAGATCTCCAACCTATGG	CACACTGACCGTTGACACCC
	Exon7	GTCTCAGGCCCCCTGCC	TGCCCTGAGCCCCCTG
	Exon8	TTTTTGGCGAGACCCACAG	CCAGTCTGTTCGTCCTGGTG
	Exon9	ACGTGAAAGCTCAGAGAGGC	CTCTTCCCTGGGAAGTTCGGG
	Exon10.1	GAGATGCAGGGAAACAGACCC	ACAGGGACCCCGGAGAAC
	Exon10.2	CGGGAACGGAGAACAGGAAAC	GTTGGGCATCTCTGACGGTG
	Exon11.1	TGGTGGTGGAGCCTCGG	GCCCCCTTGAGAATGTCTG
	Exon11.2	GGTGGCCACCAGGGCAG	AGGCCAACCTGGACTG
	Exon11.3	GGACCTCATAGCGCCCAG	GGATGTCTCATGCTCCCTG
	Exon11.4	ACCCATGACGAGGCAGTTG	CTCCTTGAGGTGTGGTGAC
	Exon12	AAGCAGAGCAGAAGGCAGAG	CAGGAGGCGACAGGCTAAC
	Exon13	CTGGTGCCCACCCCAAC	GAGGGAGGGACGCCAATC
	Exon14	CTCAGAGCCTGAAAGGCAGTG	CCTGTCCCGGTTCACTCAC
	Exon15.1	CGTCAGGTTCTGAAGGC	CTCTGCTGCCCCGAGTG
	Exon15.2	CGTGTGTTGACCTCCAGGC	GTACCTCTGACCGTGCTG
	Exon15.3	GCTGGCCGCCACCCAC	CCTCGAGGGGGCACCTACC
	Exon15.4	GGACAGCACCCAGGCC	GGCACAGAACTGCACAGTG
	Exon15.5	TGACTGTCAAGATAGGAGCC	CGGCACAGTTCCCCCTG
	Exon15.6	GGCCACCCCTAACGGTGAAG	CGTTCATCTACCGAGACCCAG
	Exon15.7	CGATGATATTGAAGGTGCC	CACGCTTACAAACAGCACAGG
	Exon15.8	GTAGGTGGCGGCCCTCG	CTCTTACACCTCCGCTCG
	Exon15.9	CAAGTGCAGGGCGGGTG	CTTCTCGCTACCGTGCTC
	Exon15.10	AGAAGGTGCCAGCATCC	CACCCATAGCTCCCCAC
	Exon15.11	TGGTCTCCGACGCCGGG	TCATGTACCATGGCTTCCC
	Exon15.12	TGTAGGTGACGTGCGCGG	CCCGTTCTCCCACAGCTTC
	Exon15.13	CATCTGTGCTGCCCTGG	CGACTCGCTGGTCATCCTG

	Exon15.14	CAGTCTGGTAGGTGACGCAG	GGCCTACCACTGGACTTTG
	Exon15.15	ACCCTCAATGATGGGCACC	GCAACTACTGGAGGCCAC
	Exon15.16	TCTCTGGGCTCATGGGTG	CCACTGACACAGAGCATCCAG
	Exon16	TAGATGACCAGGGAGGCTGG	AAACTGGATGGGCTCTCAG
	Exon17	CCTGTCAAGCCCCACTTCTG	TCCAGCAGGCCAAATAGACC
	Exon18.1	TCACAGAGTCGGGGGATC	ATGAGACACCACATCCACG
	Exon18.2	CGTGAGCGTAAGGTGTATC	GAGGGGTAGTGTGAGCG
	Exon19	GAGCAGGTGGCAGTCTCG	CTCCCAGTGATGCCGTGG
	Exon20	GTGAGCAGGTGGCAGTCTC	GTGATGCCGTGGGAC
	Exon21	CAGGGGTACAGGTCTGGTC	CGAGACTGCCACCTGCTC
	Exon22	GGGTGGCATGGGCAC	GTGGGCTCTCAGCTGCAG
	Exon23.1	CCTACGAGAAACGCCCTCCC	GCGCCAGATCCCCATC
	Exon23.2	CGAGTTGGGACACCTTC	CGGAGCCTGCTGTGCTATG
	Exon23.3	GGGGATGGAGAAGTGGCAG	CACTGACCTCACGCATGTCTG
	Exon24	GCAATGTCAGGGCATGTC	GGGTGGTTAGCTTCCCG
	Exon25.1	CTCCCAGGAGCACAGGGTC	GAGACCCAGCGGGGAGTTAC
	Exon25.2	CACAAAGCGGACATGGCTT	CACGTCCGCTACCCCTTC
	Exon26	CACAGCCAGTGAGAGCAGG	AGCTTGACGTGACCTCC
	Exon27	CAGAGGGGAGAGCTTGG	AGATGACTTGCCTGGGATGC
	Exon28	CCACGGAGTGGGAACATGG	GTGTGGCACGACAACAAAGG
	Exon29	GAAGGGCTGGCAGGAAG	CCTCCTGCACTGCAG
	Exon30	GCTCCATTCCAGTACTCCC	GTGGCGACTCTGCCTACAG
	Exon31	TCCAACAAAGCCTGCTGAG	GGTGGTTCTCATCCCTGTC
	Exon32	TGACCACATGGAGGCCACAG	AGGTGAGGACTCTACTGGGG
	Exon33	TACAGGAGGCATAGGGTGG	CTGGTACCTTGCTGACCCG
	Exon34	TTCAGAGAAGTGAAGTGGTC	GGCTCTGAAGCTCACCCCTG
	Exon35	CTGGGGAGCAGAGACAGAC	GGTTAACATGGGCTTGGCTG
	Exon36	GTATGGAGGCCTGTAGCC	GAGCTGCCCTCACAGGTC
	Exon37	CAAGAGACGGAGGTGGCAG	GCTACAGGCCTCCATCACG
	Exon38	CAAAGCCCTGCTGTCACTG	ACATGTCCCCTAGGGCTGG
	Exon39	GTCCTCTGGGCTCTGGTG	GTCGCTCTCAACAAAGAGG
	Exon40	CACTCCTGGAGAACTACTCCCTTG	AAACACTCTGTTGGGTTTG
	Exon41	CTGGCTGGTACTGCGG	CGCCAAGGACAAGGGAGTAG
	Exon42	GGTCTGGCCGGGGAC	CTTCCACAGCCCTCAGC
	Exon43.1	GCTTGCCTAAAGACGGACC	CCACGGCACTGGTACGC
	Exon43.2	CACGGGCTGGGAGC	CCCTCCGCCCTCCCTG
	Exon44	TGAGCTGAGCTAACAGGCC	CTTCTGCTTTGGTCAGG
	Exon45.1	GGTACAGCTCTCACGCAAG	GGGAGGGCGTCTAGCTC
	Exon45.2	CACAGGGGCTCAGTCAGTC	TGTCAACCCTGCTGTG
	Exon46.1	TGTCCACTCCGACTCCACG	CCTCCAAGCCGTGTTGA
	Exon46.2	GTCGGTCAAACGGGTGAG	GAGGGACACGCCCTGG
<i>PKD2</i>	Exon1.1	TCCTGAGGCGCACAGC	AGCGGAGGAGAAGGGGAG
	Exon1.2	GGCCTGGAGATCGAGATGC	CGCCGTGGTAGCCCC
	Exon1.3	GCAGCCGGAGGTCGG	CCGGCCGTTCTGGTTC
	Exon2	TGATTTGGATAAGGTCAAATCTTTTC	TTTATTTCCCTTTGCCATTTC
	Exon3	AGGCCTGTCGATACTCATGC	CTGCTGGTATGTGAATGTGTGC
	Exon4.1	TCATCTCTCAAGTCCTGGGG	GTTATGCAAACGATGCAGGC
	Exon4.2	TGAATGGTGGAGTCAGAG	CAACCGAAGTTTCATTTCTATG
	Exon5.1	CCTCAAGTGTCCACTGATTG	AAAAGTTGCCCTGGTTCCTC
	Exon5.2	GTTAGTAGCCACTGGGAATC	CTGGCTAACCCAGAACATAGG
	Exon6.1	GCTGTATTCAATGTGTTGTTG	GCGAATTCCAATATCTCTCC
	Exon6.2	CCTTAAAGCTGATCCGATATG	TGCTGAGGAGATCAAAGACTC
	Exon7.1	GAGCCCTTATAATTACATTGGTG	ACTGTGACAGCAGCTATATTG
	Exon7.2	GCTTTCAGCTGTCAGTGG	AGCTTTGGCTGGTCACTTG
	Exon8.1	AATTCTTTCAAGGATGAAATAATG	GTGCCAAGACAAGGTATGC
	Exon8.2	TAACAGGACCATGAGCCAGC	CTTGAGAACAGTGACAACCTCG
	Exon9	GTTGCATCAACTAGTGGACATTG	GTGTGAGGAGAAAGAGAACAA
	Exon10	TCTTCCTTAATTTCGCCCCCTCC	AATCTGGGTGAAACAATGCTC
	Exon11	GAGCCCTTGGCTAGAAATAC	GAAAGTAAACAGATGCAAAGG,
	Exon12	TGTTGATACATCTGTGGTGTG	CTGTGTTGAGGGTGAACTGG
	Exon13	CTGCCTGGTCTCATGTGGAC	TCCTGGTGAGGCTCTGTG

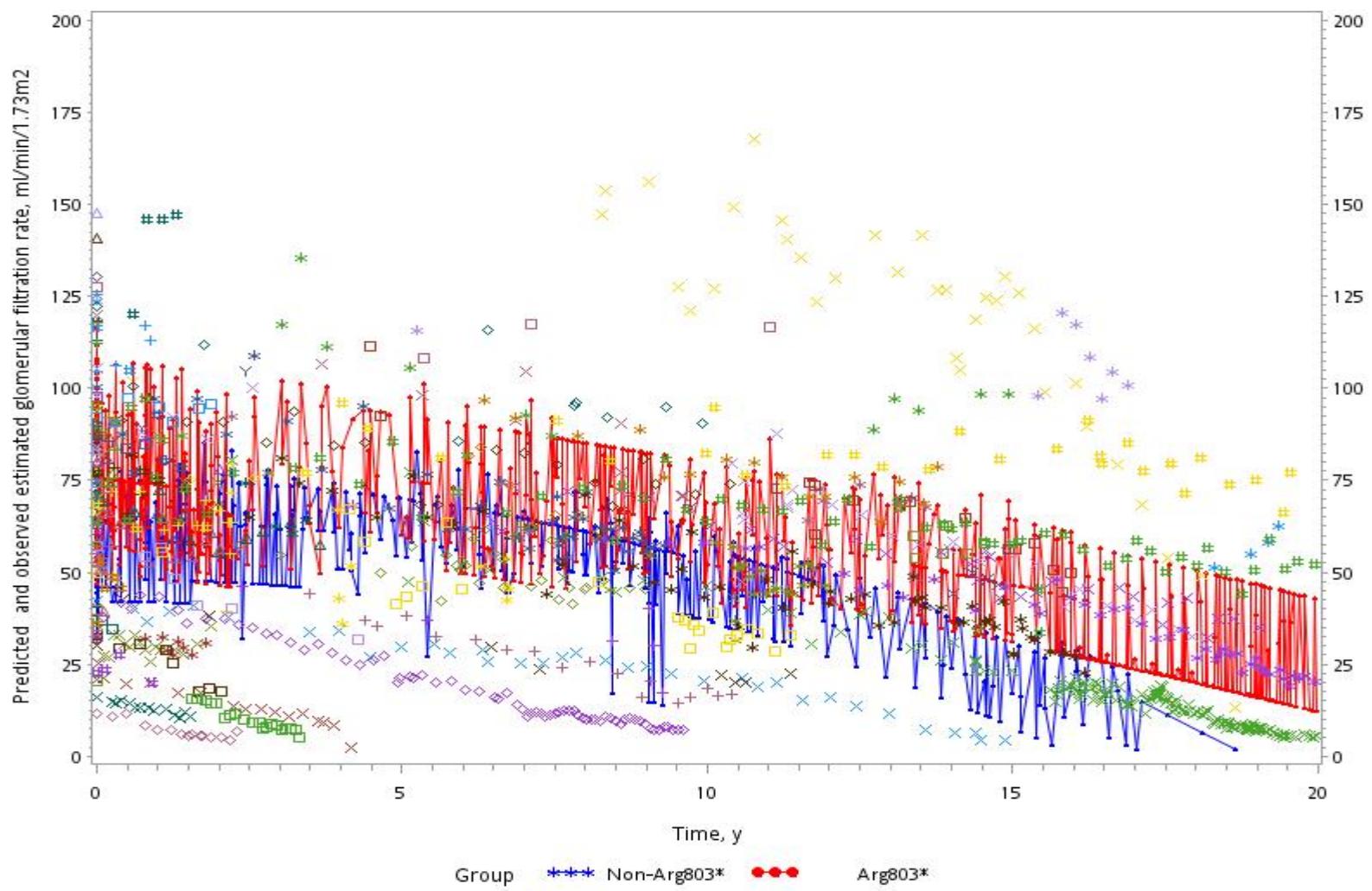
	Exon14	ACTTCAAATACAACGTCAAGCAAC	TGGGGCTGAAAAGACAATG
	Exon15_1	GACTTCCTAAGGCATTCCCTCTAC	AGCTTCTGGGGCGAGG
	Exon15_2	GTGAAGAGTTGAAACGCTGG	CAGGACAGCCACTTCCTCAC
<i>PKHD1</i>	Exon2	AACACCTGCTGAAACAGT	AGCTATGCTGCTCCAATCAA
	Exon3	TCAGGCCACTTACACCT	TCTGGTGATTCTGAGGCAGG
	Exon4	CAGGATCTAGCACAGTTACAC	ATCCCTCATCCTGTCTGGTCT
	Exon5	TAACCCGGTCAAGCAGACAC	GGGCTGCTAGCTTGGAAAT
	Exon6	AATTTCACACTCATAAAAACACT	TTACCTTCAGTAATGCTGCTGA
	Exon7	GACCTGCTTGCCATATTGAG	TTTATTGCCATCAGGGAAGC
	Exon8	TGGTAGTGGGAGGAAAGA	CCAGAGGAGAGTGTTCATAGCC
	Exon9	TCCCATGAGAACCAATCTGC	TCTCTGTCTACCATTCTCTAGC
	Exon10	AGGACACAACCTCATTACCCA	CCCAGAACACTCGTCAGAT
	Exon11	AGCTTCGGGTGTTAATGGTC	TTCCCAATCTCCCTTCAGGCA
	Exon12	TTGCTGGACTTAGAAAGTAAAGTAAG	TGCCATACAGACATATAATCTCCT
	Exon13	ATCTCCGACTGCctctc	ATTGAACAGCCCTGGTGG
	Exon14	CCAATTGGGAAGGTGCG	CCTTCCTTATCTGCTCTAGCC
	Exon15	CATGGGTATGGGACTGGCAA	AGACAAAGTACAAGGGCAGTC
	Exon16_1	GAGATGCCTGGAAGCTGCAT	AGGATTCAGCCAGGTGTTGT
	Exon16_2	AA GTGGACCTGTTGGTGG	CAGTGCTCTGCTACATGGG
	Exon17	TGAGGAGGAATGTCCTGTGTT	AACCTCTCAATGGTTGTTGAATC
	Exon18	CTAGTCAGCCAACTCCCTGCAA	ACAATCAGAAATGAAGCCACGG
	Exon19	GCACACATGTAGGGAAAGCTCT	TACCTACCCACCTGACCCAG
	Exon20	TGTTGAATGACTGCTTCTGC	CCTGAGGTGGTAACTGTCC
	Exon21	CTCCCTGAGAGCCCAGTCT	ATGTGACCGGCTTGTGGAG
	Exon22	TCCACACAGCAAGTCTACCA	AGTCACACCTGTGTCCCTCA
	Exon23	CCTAGGTGCACACCCCAAC	ACCTCCCAGGATGTTGTTCC
	Exon24	GAGGATGAAACTCTGTAAGGTGGA	GCAGCAAATCCATGCCACTA
	Exon25	TTAGACGAGATTAGATTGGTTC	tccatgttacaaatcagtgagg
	Exon26	CATCACCAAGCTACATGGCT	GTCAGCTGGGAGCACTCA
	Exon27_1	GGCAGAGAAGGAACATTGATG	ACCAGAGGGCTCACCAACA
	Exon27_2	CCGGAACTGGTTCTGTTG	TGTGAGACCCCTCCCCAGATT
	Exon28_1	CCTGCAGTTGAGCATGGC	CCACTTACCCCTGGTGGAAAC
	Exon28_1	ACCATCCGAGGCTCTAGTTG	TGGGGTCAGTTCCCACTTC
	Exon29	TTCTCTCCCTTAAGTCAGTCCTAC	TTTCAGAGGACATTGATTGCC
	Exon30	CCCCACATGTCAAGGCTAT	AATGCAAGTGGTCACCTCAC
	Exon31	CAGACAGTTGCTCTCTCCTC	CCCTCTCTGACCTCACTGG
	Exon32_1	GGACTTCCACAGGTGCTATGAA	GGCGAAGAACCTGTTGCCAG
	Exon32_2	CACTGTTCCAGCTGCCGT	GTTGCCCTGGAAGGACTGTG
	Exon32_3	TCCTCTGGGAACCTGAAC	AAGAAGCAACCCCTCACAG
	Exon32_4	CATCTCCCCTCGCAGGGTT	TGCAATTCCCTGACACTCG
	Exon32_5	CTCCCTGAACGTACAGTCC	GCCAAGTCTTGTCTGGCA
	Exon32_6	AATGCAAGCCACGGTGT	TTCACCGTCAGGCAGGTCT
	Exon32_7	GGTGGAAAGCCTTGGACCAT	GAGATCTGGGCCACTGCAAA
	Exon32_8	TAACCTTGCACTGGCCAG	CCAGAAGTGAAGGGAGCTACCA
	Exon33	GAGTTGAGTAAGAAGGGAGATTG	AGAATTAAACCAAGAATATCATT
	Exon34_1	GGCCTTAGGTTCTCTGTGG	AGAGGCCCGAGAATGATGGA
	Exon34_2	CTGAAGCGTGAGGAGGACAG	GGTCCATTGGCCAAGCATT
	Exon35	ACACCCCCATTAAACCTCCCC	ATCGCTGCCATTGGACTAA
	Exon36	gaagcaacagaccggcaac	AAAGTTCCCTCCTCCATCC
	Exon37	CCCAGGGACTGACAATTTC	TGCTAGACACAGCTACTTCATT
	Exon38	TGGACAACCTTCTCGGGC	AACTTAGCCAAGCTGACACTCA
	Exon39	TTGGAGTGTGCTCTCAGTTCT	CAACCACAGCAATGCCATCT
	Exon40_1	TGGGAGATTGCTGGAAAGCA	ACCTCTCATAGCTCCACCA
	Exon40_2	TCAGGTAATCTGCAGCACTGT	TCCACCATGCACTGTAGTGC
	Exon41	GGTCAACAGAAATCTCAGGAGC	TTTGGGGAGAATTCAATTG
	Exon42	ACATTTCGCCATCAGGCTTG	AGATCTGTATCTCTTCCCTGATT
	Exon43	TGCCCTCTCAGTTCTGGTCT	TGCATTATGTGAACCTGATGTGT
	Exon44	AAACAAGAGTCTTCTTCAGC	AAACAATGCCCAAAGTGCTC
	Exon45	TGGCTTAATTCAATTGTTCACT	CCCTCAAGGGCAAGTCAAT
	Exon46	AAAAGCTACAGGAAGTCCGC	GCCCAGCACATGTAATTG

	Exon47	TGAATTGTATTCATGTGTCAG	TGATTCAAAAGTATTGCCACTA
	Exon48_1	AGTGCTATTGTCGCATTGT	AAGAACACCTCCTCACAGG
	Exon48_2	TGTGAAGACCAGCCAGTTGA	ATGCCCATCGGCAAGCTAAA
	Exon49	TGAGCAAATAATCTCTCAACCCA	TGAGAATGCAGCATACCAACT
	Exon50_1	GGTGGAAATGATGGGGTTCCT	ACCCAGATAGGTGAGTTGCC
	Exon50_2	CCTTGACAACTTGTCTCCTGG	TGGAATTGAAGGGTGAATTGGTG
	Exon51	TTAACTAACAAAGGATTTCAATTCTG	AACAGTATGACAAGGTGGAATTTC
	Exon52	GCATCCTAAAAATAAGGATAGAATTG	AATCAGATCTGGCTGGGTC
	Exon53	TCCCCAAACTGCTGGGAGAAC	CTGTTCCCAGAGCCCCCTTC
	Exon54	ACTGCAATTCTCCCTCTCTTC	AAAGGGTGTGGAATTAGCAT
	Exon55	CAAAATCTCAAGCAGAAGCAACC	TTTGACAAACAGCCTCTGG
	Exon56	AGATGATTGTCGCTGACTG	CCAAACATGGCTTCCTAGCTC
	Exon57	TTCTCAGGTTGCTGGGTCC	AGGCTCCAACGGTAATGGC
	Exon58_1	GCCTTTGTCGGGAGAGGGA	GTGACAGTATAGGCCTGACCC
	Exon58_2	AGCTGGCATGGCATAGATT	GGCCATGAAGACTTGAATGCG
	Exon58_3	CTTTCACATCCGAGGCCACA	GACGGAATTGGTGGAGCAGA
	Exon58_4	TTGGTCTTGTGGCAGTAGTGT	CTTGTCCATGGCTCTGA
	Exon58_5	GAGCTCCCTCAAATCCAAAGAG	ACAGCAAGCACTAGACCACA
	Exon59	TCGATATTGTCGGCTGGTGGT	AGGGTTGAAGAATTGCCAAGTA
	Exon60	CCAATGTATAATTCTCTGCTGC	TGCCTCTACCACAGGCATTG
	Exon61A	GGTCATGCTCCAACCCATT	GAGGGCGGGCATGAGTAAAG
	Exon61_1	TCACTTGTTTGCTCTTCTTT	AGAAAGTAGACACTGACCCAGA
	Exon61_2	TGTGACTAGTGGTTTGTGATGTC	AGCTGACTGAACCAGAGTGG
	Exon61_3	GAGCCCCACGTCTTCTTAG	GATTGGTTGGCCAATCTGT
	Exon61_4	CCTCACTGTGATGGTTCACTC	CCACAGTCATTGGGGTGAA
	Exon61_5	GTTGGTCAACGTAGGCCTCT	ACCCATAGCCAATGACTCCC
	Exon61_6	TCGCCAACAGTAAGGAGCAC	TCAGTGAAGTAGATTGACATTG
	Exon62	GGATTGTGAAAATTGCTACC	AGGCTGAATGCTACATGCTAC
	Exon62A	TGATGCTCAGGTATTAGAAAAAGTG	ACAGCATCAGGTAGACTAGGT
	Exon63	TCTGATCCATCTTCTAACTCAC	AATTCACTTACCAATTGCTAT
	Exon64	GTCCAAATGTCGCCCTCGC	TCCCACTATAAGGGAGAAAGGA
	Exon65	ACATCTTCTTCCCCGCCA	GTCTTGGGAAAGAAACAGAAC
	Exon66	ACCTAACATGCTGATGGTCCC	AGGAGAGGGAGGCTAGACC
	Exon67_1	CCATTCTCCCTATTCTTTCC	CCTCTTCCAGTCCAGTC
	Exon67_2	CATCTGTCCTCAGGTGCT	CGGGTGTACTGAATGAAGGCA
	Exon67_3	CTGCTGCTATGCCAGACTT	AGTCCTCACTCCCCAGCTT
<i>GANAB</i>	Exon1	GCCTCCAGAGGAACAAAGGT	CGCTCAGGTGCAACCAATC
	Exon2	CCTTAGGCACTCCATCTGC	AGTGTATGACAGGAAGAAGCT
	Exon3	GGCCACAAATTCCCCCTT	ATCTGTGGCAGATGGAGTGC
	Exon4	ATCAGGAAGGGAGAAAGGGC	TTAGGCAAAGGGCTCAAAGG
	Exon5	ACCTCACACACCCCTATGC	TGTCATTACTCCTTGGCCC
	Exon6	GGGTGAGTGAAGGGCTGAA	CCCCCATCTGGAAAGTTGT
	Exon7	CCCGCTCCCATCAACTAAA	TCGTTCTTGGACCTTG
	Exon8	TGGGGCCTGGAAGAAAAAC	GGAGAGGCCATGAGAAACT
	Exon9	TGACCCATGCTGCCTAGAG	GACAGCAAGCCGTATGGTG
	Exon10	CCAGTTAGCAGCCCAAGTCT	TGCCCTAGTATACCTATTG
	Exon12-1	GGTCCCAGGTGAAATACCG	TTATACCCCTCAGCTGCCT
	Exon11	GCTTGGGTTGGAAAATGG	GGCACAGGATCTCTGAAAAC
	Exon12-2	CCTGATGTTGGGGTCTACG	GAGGCTGATGTGCTGGAAGT
	Exon13	CCTAAGGGGCAAAAGAGCC	TCACGCTTGGCTTCTCAGG
	Exon14	AAGGCCCCCTGATATGTTG	GGGAGAGTTGATTGGCCAG
	Exon15	AGTGAGGAGCAAAAGCCAGC	TCTGTCCCCATTCTGCC
	Exon16	CATGGCTCCTGAGATCTGG	GGGCCTGAGAGAGGAGAGTT
	Exon17	TTGGTCTGTGCCCTCTACT	ATCTTCAGCAGGGTCTGGG
	Exon18-1	CCAGTCCTAATACCCCCCA	AAAAAACCCAGAGGCCAGAGC
	Exon18-2	GTTGACAGAAGGGCAGCAA	CAAGTTAGGGCCTTGGGAA
	Exon19	GGGGGATTAGTCCCCAGAACAA	CCAGTTCTGGAGGAGCATT
	Exon20	ACCACACCTGTGAGTGACAA	TAGTGAAGCTGGTGGTCAG
	Exon21	CCACACAGCATGTTTGCTT	CATGGTGGGAAAGATGGT
	Exon22	GCACAACCCAGAGAACCTGA	TGCCTTAGGGTCCAGTACCT

	Exon23	AGAGCACAGTGAACCTGGGAG	GCGAGTCCTCAGCCATT
	Exon24	AACAACAACGTTCTACAGGC	GACCTGCTTGGGTCTC
	Exon25	TGCCCTGAGAACGTTGTT	TAAGTGAAGTCTGGGAGGG
<i>DNAJB11</i>	Exon1	CTGCTCTGCGGACCAAGG	AGCAAAGGCTGACCCACAG
	Exon2-1	TCTCTCCCTCTACTTCCCAGAC	GAGCTGAAAGGAGTGTTCTCT
	Exon2-2	CCTCTTGCTCAGATAAAACC	CCTCATAGCAGCACCCAGA
	Exon2	GAAGTATTCTCTCCCTCTACTC	GTGAGCTGAAAGGAGTGTTCTC
	Exon3	ACCCACTGTCAAAGTAAAAACAAAC	AATCGCTAAGTGACCCCTCTCT
	Exon4-1	CCCTCGTCAGCAAGACAGAA	TCAGTGTATCATGAACCAAGCA
	Exon4-2	AAATACCTTGTAGTTTGACAAATG	CCTGCATATACTTCTCAAAGTG
	Exon5	AGTCCAGGCATATGTGCAGAG	CTTGGTAGAACAAAGAAGGTGCT
	Exon6	GGCACACTACAGTCTTCAAAGAAA	TTCACAAACAAGCAGAGAGCA
	Exon7	GAGACACTGCCGTACAGAT	AGTCTAACTGCTCTGGTGGC
<i>ALG8</i>	Exon8	GTTGAAAGAGTGGTGTACACCT	GCTTCAAAAGGATGCAGAACGA
	Exon9	CTGCTGAGTACATTCCCTT	GTTCTCTATTGCCATCCTTTCT
	Exon10	TGCAATTACGTTGGAGATTGGT	ACCTTGCAAGATAATAATATCGCT
	Exon1	ACCCAGGGATATCCACACCT	GGCTTCAGAGGGTTCTC
	Exon2	GCACCCAGCCAGAAAACATT	TGTGACAGCTTAGGAAATGTCA
	Exon3	AATCGTTGCACCATCTTGT	CCTTCCATACAAATGACATGCTC
	Exon4	GCAGAAGTGTGTTCCGATG	CACCCCCACACTCATTTCA
	Exon5	GCACTTGGCAGCTCAAACA	ACTCCATCAGCTGGTATAGTTCA
	Exon6	cattatgcatttCATTTACCCCTG	AAGCAAGCCACCAAGTCAAC
	Exon7	TGTTCCCTTCCATCTTCTGGT	GGGAGTCACGTGGTAAGG
<i>PKD2</i> Microsatellite Primer	Exon8	CCCAGACCCATAACTTCTAC	TCTCCATGTGCTAACGTCT
	Exon9	TCTTAGCCTTAAGCAGAAATAAGA	GAAATGAGCACCACGTGAGT
	Exon10	GGCTGTCTTCAGAGATGATGC	ATGCCCCAAATGCTACTGGC
	Exon11	GTGGGCCTCGATGAAAAGGT	TCTATGCTCAGCCAGTTCT
	Exon12	AGCTTATTGACCACCTAGGTGTA	CTCAGCATCTTAGATGTCACAA
	Exon13_1	TGTTGCTAAACCAGGATGACT	TTGTCTGCCAATAGCAGAGT
	Exon13_2	GCCTCTGGAAGTCTGCTGTG	GGCAACTTCTCAAGTTCTGG
	D4S231	GAGAGAAAGGGAAAGGGATGCTAGAGTCCCTAGTG	
		AGATGAGTATGTTATTATACC	
	D4S1534	GAGAGAAAGGGAAAGGGACCATGTGTGATTACAGTTTCAGCC	
		TAGACCAGCCAAGGTAGAGGAG	
	D4S1542	GAGAGAAAGGGAAAGGGAAAGATCGACTCCAGTGCATTCC	
		GATTCAGTTCTCAAATTCTCCC	
	D4S1563	GAGAGAAAGGGAAAGGGAGCTGCCTGACACACTGG	
		ACTATTGCTGTTGCTGACCC	
	D4S1544	GAGAGAAAGGGAAAGGGATGCCATAAAATATCAAAATAGTCACAG	
		GCTAGTAGTATTAAGGCTGTTGG	
	D4S414	GAGAGAAAGGGAAAGGGATCTTGCACAAAGCATCAGCCCTC	
		TCAGGAACCTCAGCCCATTAAAG	



Supplementary Figure 1. Microsatellite Analysis of 24 PKD2 p.R803* families. a Position of 5 microsatellite markers, including D4S1534, D4S1542, D4S1563, D4S1544, and D4S414. The region between D4S1534 and D4S414 is around 0.6 cM. b Microsatellite D4S1563 analysis showed a peak in the 230 bp position (red dot) in 11 samples. Figure not drawn to scale. cM: centimorgan.



Supplementary Figure 2. The observed and predicted trajectory of estimated glomerular filtration rate in individuals with PKD2 p.Arg803* and non-p.Arg803* truncation. The estimated glomerular filtration rate (eGFR) was calculated using the simplified Modification of Diet in Renal Disease equation. The predicted eGFR was generated by the mixed model for repeated measures incorporating random intercept and slope after putting the age at baseline, sex, follow-up year, quadratic follow-up year, and the interaction term between time and group of with and without p.Arg803 mutation using the forced entry approach.

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